

IPSL SERIES

LOW RANGE INDUSTRIAL PRESSURE SENSOR



The IPSL is suitable for use in a wide range of applications. The probe uses a piezo-resistive silicon sensor, giving excellent media compatibility within an oil filled 316L stainless steel housing.

The electronics incorporate a microprocessor based amplifier, requiring no adjusting and giving stable electronics, especially in high vibration/shock applications.

Each device is temperature compensated, calibrated and supplied with a traceable serial number and calibration data.*

There is a choice of internal O ring seals to ensure that the device is compatible with a wide range of media.

*Calibration data is supplied as a sticker affixed to the product packaging - do not discard.

Custom versions can be made for particular applications.

Features

- Piezo-resistive sensor
- Stainless steel body & diaphragm
- Accuracy $\leq \pm 0.25\%$ FS BFSL
- Various outputs including Volts and mA
- Pressure ranges from 50 mbar to 1000 mbar
- Gauge or Absolute pressure reference
- IP65 Large DIN 43650 electrical connector & plug
- 1/4" BSP Pressure port connection

Suitable Applications

- HVAC
- Pneumatics
- Rainwater harvesting
- Agricultural machinery
- Laboratory testing
- Mechanical engineering
- Environmental engineering
- Automotive testing
- Tank gauging
- IBC, IBC Tote or pallet tank

Options Available

- Pressure range
- Pressure reference (G or Abs)
- Output type



SPECIFICATIONS

Performance

Accuracy (Non-linearity & Hysteresis)	$\leq \pm 0.25\%$ / FS (BFSL) for gauge, $\leq \pm 0.5\%$ for Absolute	
Setting Errors (Offsets)	2-wire	Zero & Full Scale, $\leq \pm 0.5\%$ / FS
	3-wire	Zero & Full Scale, $\leq \pm 0.5\%$ / FS
Permissible Load	2-wire	$R_{max} = [(Supply - 9min)/0.02] \Omega$
	3-wire	$R_{min} = 10k\Omega$
Influence Effects	Supply	$< 0.005\%$ FS / 1V
	Load	0.05% FSO / $k\Omega$

Material

Housing	303 Stainless Steel
"O" Ring Seals	Viton
Diaphragm	316L Stainless Steel
Media Wetted Parts	Housing & connection, 'O' ring seal, diaphragm

Miscellaneous

Current Consumption	2-wire Limits at 28mA
	3-wire Typical 6mA
Weight	Approx 100g
Installation Position	Any, small zero shift when tilted through 90°
Operation Life	> 100 x 10 ⁶ cycles
Insulation Resistance	> 50MΩ at 50Vdc

Electrical Protection

Supply Reverse Polarity	No damage/no function
Electromagnetic Compatibility	CE Compliant

Environmental Conditions

Shock	100g / 11s
Vibration	10g RMS (20 - 2000Hz)
Media Temperature	-40°C to +125°C
Ambient Temperature	-20°C to +80°C
Storage Temperature	-40°C to +125°C
Humidity	5% to 95% RH non-condensing

Temperature & Thermal Effects

Compensated Temperature Range	+20°C to +80°C
Thermal Zero Shift (TZS)	<±0.04% /FS/°C
Thermal Span Shift	<-0.015% /°C

Pressure Ranges & Passive mV/V Outputs

Nominal Pressure, Gauge	mbar	50	100	250	500	750	1000
Nominal Pressure, Absolute	mbar				500	750	1000
Permissible Overpressure	mbar	2 bar	2 bar	2 bar	5 bar	5 bar	5 bar

Output Signal & Supply Voltage DIN 43650

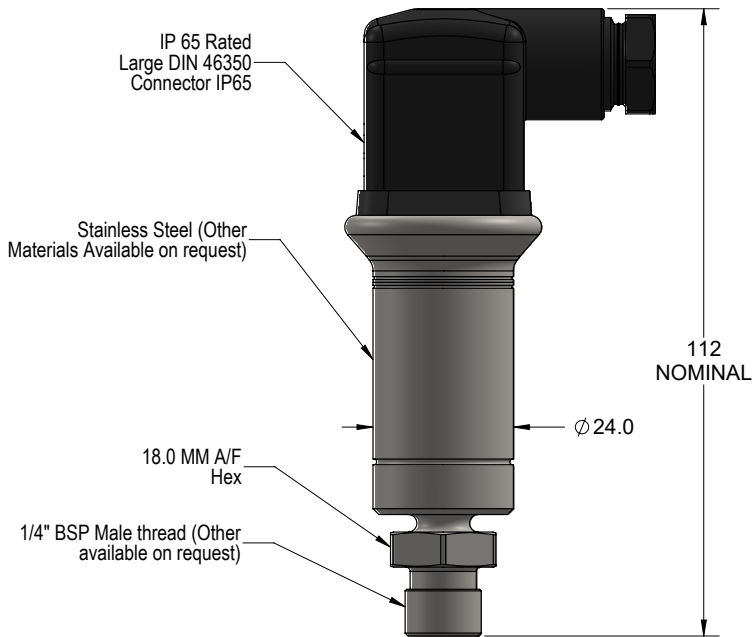
Wire System	Output	Supply Voltage	Connection	Pin No.
2-wire	4 - 20mA	9 – 32V dc	+ve Supply	Pin 1
			-ve Supply	Pin 2
			Ground	Earth pin
3-wire	0.5 - 4.5Vdc (non-ratiometric)	9 – 32V dc	+ve Supply	Pin 1
			-ve Supply	Pin 2
			+ve Output	Pin 3
			Ground	Earth pin

Part No	Pressure Range	Output
IPSL-G0050-5	0 - 50mbar G	4-20mA
IPSL-G0100-5	0 - 100mbar G	4-20mA
IPSL-G0250-5	0 - 250mbar G	4-20mA
IPSL-G0500-5	0 - 500mbar G	4-20mA
IPSL-G0750-5	0 - 750mbar G	4-20mA
IPSL-G1000-5	0 - 1000mbar G	4-20mA
IPSL-G0050-D	0 - 50mbar G	0.5 to 4.5V 3Wire
IPSL-G0100-D	0 - 100mbar G	0.5 to 4.5V 3Wire
IPSL-G0250-D	0 - 250mbar G	0.5 to 4.5V 3Wire
IPSL-G0500-D	0 - 500mbar G	0.5 to 4.5V 3Wire
IPSL-G0750-D	0 - 750mbar G	0.5 to 4.5V 3Wire
IPSL-G1000-D	0 - 1000mbar G	0.5 to 4.5V 3Wire
IPSL-A0500-5	0 - 500mbar Abs	4-20mA
IPSL-A0750-5	0 - 750mbar Abs	4-20mA
IPSL-A1000-5	0 - 1000mbar Abs	4-20mA

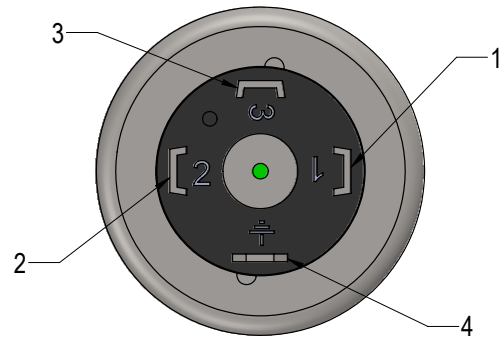


DIMENSIONS

All dimensions are in millimeters.



**TOP VIEW
(PIN OUT ELECTRICAL CONNECTION)**



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